1. Using an interval or intervals, describe all the x-values within or including a distance of the given values.

   More than 9 units from the number -1.

   A. $[-10, 8]$

   B. $(-\infty, -10) \cup (8, \infty)$

   C. $(-10, 8)$

   D. $(-\infty, -10] \cup [8, \infty)$

   E. None of the above

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2. Using an interval or intervals, describe all the x-values within or including a distance of the given values.

   More than 5 units from the number 7.

   A. $(-\infty, -2] \cup [12, \infty)$

   B. $(-2, 12)$

   C. $(-\infty, -2) \cup (12, \infty)$

   D. $[-2, 12]$

   E. None of the above

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3. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-8 - 6x < \frac{-28x - 9}{5} \leq -7 - 7x$$

   A. $[a, b)$, where $a \in [14.25, 21]$ and $b \in [1.5, 5.25]$

   B. $(-\infty, a) \cup [b, \infty)$, where $a \in [13.5, 21]$ and $b \in [2.25, 5.25]$

   C. $(a, b]$, where $a \in [12, 18.75]$ and $b \in [3, 6.75]$

   D. $(-\infty, a] \cup (b, \infty)$, where $a \in [12.75, 18]$ and $b \in [-0.75, 11.25]$

E. None of the above.

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4. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-4 - 3x \leq \frac{-7x - 3}{4} < 6 - 8x$$

A. $[a, b)$, where $a \in [-2.25, 3.75]$ and $b \in [-2.62, -0.97]$

B. $(a, b]$, where $a \in [1.5, 5.25]$ and $b \in [-4.5, 0]$

C. $(-\infty, a) \cup [b, \infty)$, where $a \in [0.75, 6]$ and $b \in [-2.32, -0.82]$

D. $(-\infty, a] \cup (b, \infty)$, where $a \in [0, 7.5]$ and $b \in [-1.57, -0.53]$

E. None of the above.

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5. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-8 + 3x > 4x \text{ or } -3 + 7x < 9x$$

A. $(-\infty, a] \cup [b, \infty)$, where $a \in [-9.75, -7.5]$ and $b \in [-3.75, -0.75]$

B. $(-\infty, a) \cup (b, \infty)$, where $a \in [0.75, 2.25]$ and $b \in [6, 12]$

C. $(-\infty, a] \cup [b, \infty)$, where $a \in [0, 2.25]$ and $b \in [5.25, 11.25]$

D. $(-\infty, a) \cup (b, \infty)$, where $a \in [-12.75, -4.5]$ and $b \in [-3.75, 0]$

E. $(-\infty, \infty)$

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6. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$\frac{-9}{2} - \frac{9}{6}x \leq \frac{-5}{7}x + \frac{3}{4}$$

A. $[a, \infty)$, where $a \in [4.5, 7.5]$

B. $(-\infty, a]$, where $a \in [-8.25, -0.75]$

C. $[a, \infty)$, where $a \in [-8.25, -6]$

D. $(-\infty, a]$, where $a \in [6, 9]$

E. None of the above.

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7. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-5 + 7x > 8x \text{ or } 7 + 5x < 8x$$

A. $(-\infty, a] \cup [b, \infty)$, where $a \in [-3, -1.5]$ and $b \in [4.27, 6]$

B. $(-\infty, a] \cup [b, \infty)$, where $a \in [-8.25, -3.75]$ and $b \in [1.27, 4.42]$

C. $(-\infty, a) \cup (b, \infty)$, where $a \in [-6, -3]$ and $b \in [-2.25, 3]$

D. $(-\infty, a) \cup (b, \infty)$, where $a \in [-3, 0]$ and $b \in [3, 7.5]$

E. $(-\infty, \infty)$

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8. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$4x - 10 \geq 7x + 5$$

A. $[a, \infty)$, where $a \in [2, 6]$

B. $(-\infty, a]$, where $a \in [1, 8]$

C. $[a, \infty)$, where $a \in [-10, -4]$

D. $(-\infty, a]$, where $a \in [-11, 0]$

E. None of the above.

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9. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-9x - 7 > -4x + 7$$

A. $(-\infty, a)$, where $a \in [0.8, 5.8]$

B. (a, ∞), where $a \in [2.8, 3.8]$

C. $(-\infty, a)$, where $a \in [-4.8, -1.8]$

D. (a, ∞), where $a \in [-7.8, -1.8]$

E. None of the above.

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10. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$\frac{6}{8} + \frac{6}{4}x \leq \frac{8}{9}x - \frac{3}{5}$$

A. $(-\infty, a]$, where $a \in [1.5, 3]$

B. $(-\infty, a]$, where $a \in [-4.5, -0.75]$

C. $[a, \infty)$, where $a \in [0, 5.25]$

D. $[a, \infty)$, where $a \in [-3.75, 0]$

E. None of the above.
